



**US Army Corps
of Engineers®**

Nashville District

Public Notice

Public Notice No. **03-75**

Date: **December 12, 2003**

Application No. **200300264**

Please address all comments to:
Nashville District Corps of Engineers, Regulatory Branch
3701 Bell Road, Nashville, TN 37214

JOINT PUBLIC NOTICE
US ARMY CORPS OF ENGINEERS
AND
STATE OF TENNESSEE

SUBJECT: Proposed Wetland Impacts and Channel Relocation Associated with State Route 249 (River Road) Bridge Replacement over Brush Creek

TO ALL CONCERNED: The application described below has been submitted for a Department of the Army Permit pursuant to **Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (CWA)** for the discharge of fill material into waters of the United States. Before a permit can be issued, certification must be provided by the state of Tennessee, Department of Environment and Conservation, pursuant to **Section 401(a)(1) of the CWA**, that applicable water quality standards will not be violated. By copy of this notice, the applicant hereby applies for the required certification.

APPLICANT: Tennessee Department of Transportation (TDOT)
Environmental Planning and Permits Division
Suite 900, J.K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

LOCATION: Wetlands adjacent to Brush Creek Mile 0.8, and Unnamed Tributary to Brush Creek Mile 0.8L, a tributary to Cumberland River Mile 160.8L, on State Route 249 (River Road), Cheatham Lake, in Cheatham County, Tennessee (Lillamay Quad; lat 36-14-1.6440, lon 87-3-26.7480)

DESCRIPTION: The proposed work consists of the discharge of fill material into four wetland areas adjacent to Brush Creek for the River Road bridge replacement. The work would involve permanent and temporary fill into four wetland areas as follows:

Wetland Area

Permanent Fill Area

Temporary Fill Area

Wetland 1	0.226 acres	0.108 acres
Wetland 2	No permanent impacts	0.016 acres
Wetland 3	0.393 acres	0.153 acres
Wetland 4	0.019 acres	0.067 acres
Totals	<hr/> 0.638 acres	<hr/> 0.344 acres

Therefore, the proposed work would permanently impact 0.638 acres of wetlands and temporarily impact 0.344 acres of wetlands. TDOT proposes to provide mitigation for the permanent wetland impacts by deducting 1.27 credits (2:1 ratio) from the Harpeth Wetland Mitigation Bank. TDOT proposes to offset the temporary wetland impacts at each site as follows:

Wetlands 1 & 4: These areas consisted of forested wetlands of sycamore, black willow, sweetgum, and green ash. TDOT proposes to restore these areas to pre-construction elevations and plant tree species such as sycamore, sweetgum, green ash, and willow oak.

Wetland 3: This wetland area was unforested and consisted of shrub/shrub vegetation. TDOT proposes to stockpile the wetland soils to preserve the seed-bank of the existing wetland vegetation. Following construction, the area would be returned to pre-construction elevations using the stockpiled wetland soils.

Wetland 2: This area consisted of forested wetlands of cypress and sycamore trees. Work in wetland 2 would be very limited; however, TDOT indicated they would place a note on the project plans indicating that the cypress trees in this area be avoided. Any disturbed soils would be returned to pre-construction elevations.

Approximately 259' of an Unnamed Tributary would be filled and relocated and an existing 68' long culvert removed in order to allow for the proposed slope. The channel would be relocated adjacent to the existing stream location outside of the proposed slope into a new channel 160' long. In addition, a new 118' long culvert would be constructed for the road crossing. Therefore, there is a 49' permanent loss of channel (Impact III class) and an additional 50' of channel impact from riprap lined channel at the outlet of the culvert (Impact II class). The existing channel has been relocated in the past along the existing highway slope. The applicant proposed mitigation of a total payment of \$17,300 to the Tennessee Wildlife Resources Foundation for the In-Lieu Fee Stream Mitigation Program. A table is attached with a detailed description of the stream impacts and payment calculations.

The purpose of the proposed work would be to remove and replace the existing 87' concrete deck girder bridge which has been determined to be deteriorating and unsafe to public traffic in the future. The new structure would consist of 120' @ 3 span concrete bridge with 2-12' wide lanes and guard rails on both sides. Also, the approaches to the new bridge would be improved by correcting the sharp curves. Thus, the purpose of the proposed work would be to improve the safety of the bridge and those traveling this section of highway. The construction would be phased so that traffic would be maintained.

Approximately 1.13 acres of Corps of Engineers property would be impacted from the project. The applicant has also proposed mitigation for this impact in the form of providing riprap for bank stabilization within the Cheatham Lake Wildlife Management Area.

Plans of the proposed work are attached to this notice.

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the work must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the work will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. In addition, the evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b)(1) of the CWA (40 CFR Part 230). A permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

An Environmental Assessment will be prepared by this office prior to a final decision concerning issuance or denial of the requested Department of the Army Permit. However, the Federal Highway Administration previously reviewed the project and recommended that the project met their categorical exclusions under provisions of 23 CFR 771.117, stating that the project as proposed will not individually or cumulatively have any significant environmental impacts.

The applicant has performed previous coordination with the Tennessee Historical Commission (THC) concerning this project. The THC responded to the project by letter dated March 21, 2002, stating that they find the area of potential effect for this undertaking contains no cultural resources eligible for listing in the National Register of Historic Places. This review constitutes the full extent of cultural resources investigations unless comment to this notice is received documenting that significant sites or properties exist which may be affected by this work, or that

adequately documents that a potential exists for the location of significant sites or properties within the permit area. Copies of this notice are being sent to the office of the State Historic Preservation Officer.

Previous coordination with the U.S. Fish and Wildlife Service (USFWS) has been performed by the applicant. The USFWS responded by letter dated September 27, 2001, stating that based on available information, the proposed work will not destroy or endanger any Federally-listed threatened or endangered species or their critical habitats, as identified under the Endangered Species Act. Therefore, we have reached a no effect determination and initiation of formal consultation procedures with the USFWS is not planned at this time.

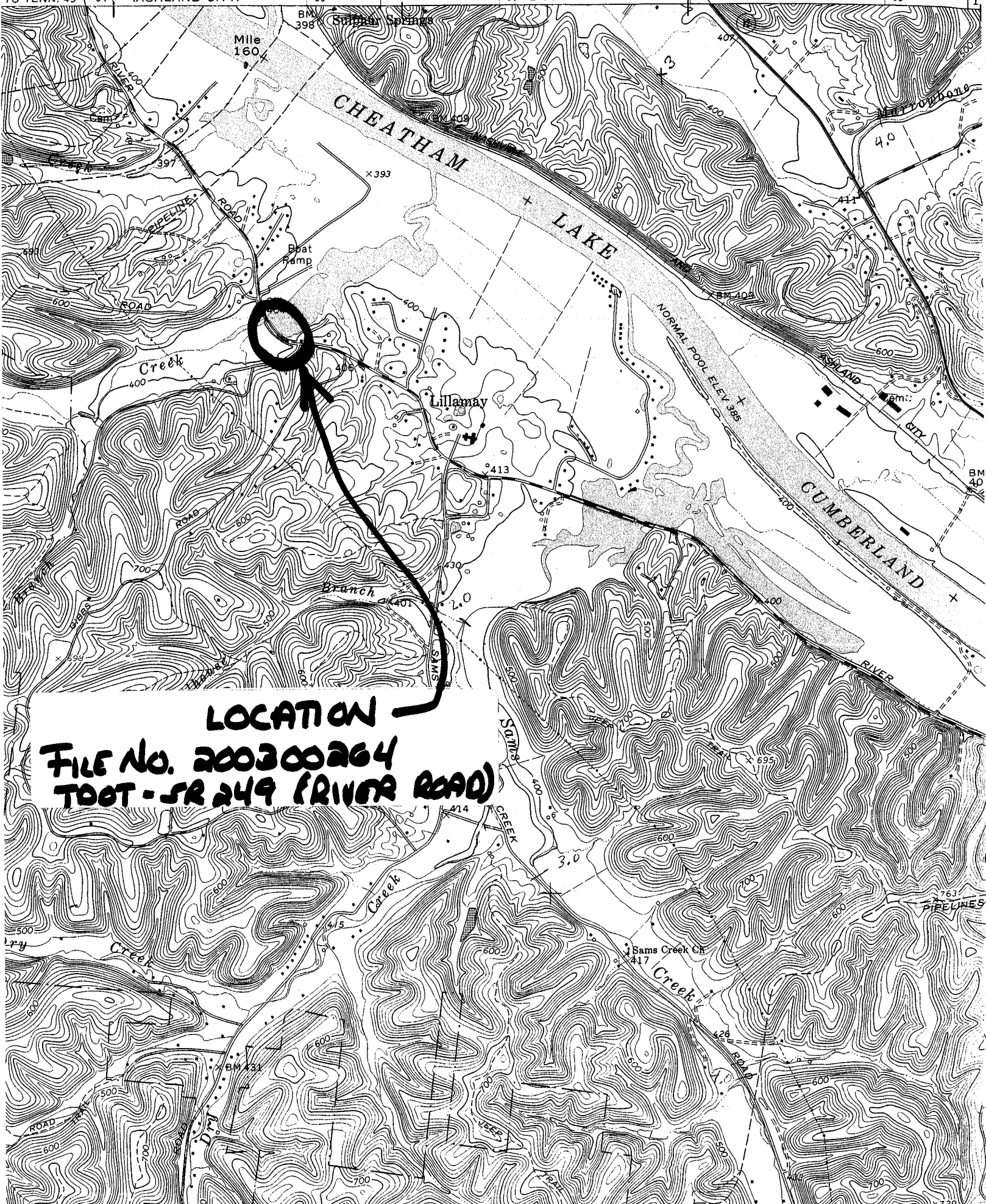
Other federal, state, and/or local approvals required for the proposed work are as follows:

Water quality certification from the state of Tennessee, in accordance with Section 401(a)(1) of the Clean Water Act.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

Written statements received in this office on or before January 12, 2004, will become a part of the record and will be considered in the determination. Any response to this notice should be directed to the Regulatory Branch, Attention: Amy Robinson at the above address, telephone (615) 369-7509.

CLARKSVILLE 35 MI.
ASHLAND CITY 2.6 MI.



FILE NO. 200300264
PN 03-75

SR-249: PIN# 101561.00, 11014-1209-94, BR-STP-249(9)

CONSTRUCTION OF BRIDGE AND APPROACHES
OVER BRUSH CREEK S.R. 249 (LOG MILE 13.51)

20+00

P.L.110+00

NOTE: RESTORE PRE-CONSTRUCTION
ELEVATION. PLANT TREES AS FOR
SCHEME OF WETLAND AREAS.

UNITED STATES OF AMERICA

(3)

TEMPORARY WETLAND
TRACT 107A.0108 AC

$$\sum_{\omega}$$

WETLAND AREA

S.R.-249

TEMPORARY WETLAND
IMPACT AREA 0.016 AC.

UNITED STATES OF AMERICA

3-2

UNDERGROWTH

1

NOTE: IN THIS AREA OF WETLAND PLEASE AVOIDED CYPRESS TREES. ANY DISTURBED SOIL WILL BE RETURNED TO PRE-CONSTRUCTION ELEVATION, SEEDED WITH AN ANNUAL GRASS AND COVERED WITH STRAW.

N

WETLAND IMPACTS

AREA OF PERMANENT FILL = 0.226 AC.

VOLUME OF PERMANENT FILL = 304 C.Y.

VOLUME OF TEMPORARY FILL = 76 C.Y.

PERMANENT IMPACT

TEMPORARY IMPACT

1915

1916

WALLACE ALLEN DAVIDSON A

FRAZIER C. HILAND
AND WIFE LULA BELLE HILAND

P.L. 115+00

GRAVEL PIT

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FRAZIER C. HILAND
WIFE LULA BELLE HILAND
P.L. 115+00
(4)

00+cr-

JAMES M. LOVELL

**JAMES M. LOVELL AND
WIFE ANITA D. LOVELL**

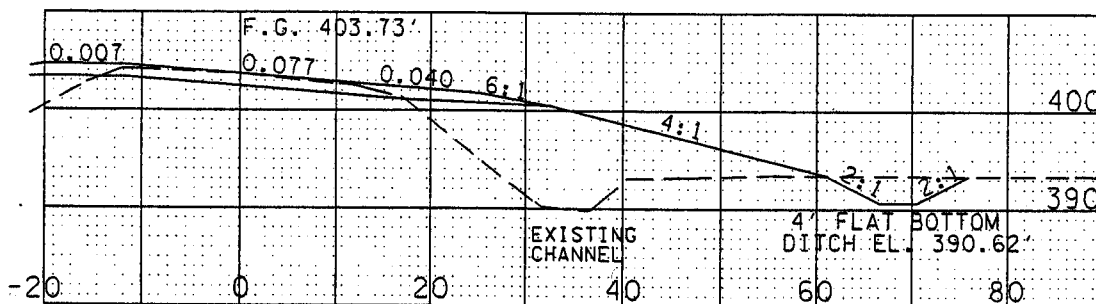
WOODS &
UNDERCROFT

EQU. BACK $115+59.70$
 AHEAD $115+54.59$

SCALE: 1"=100

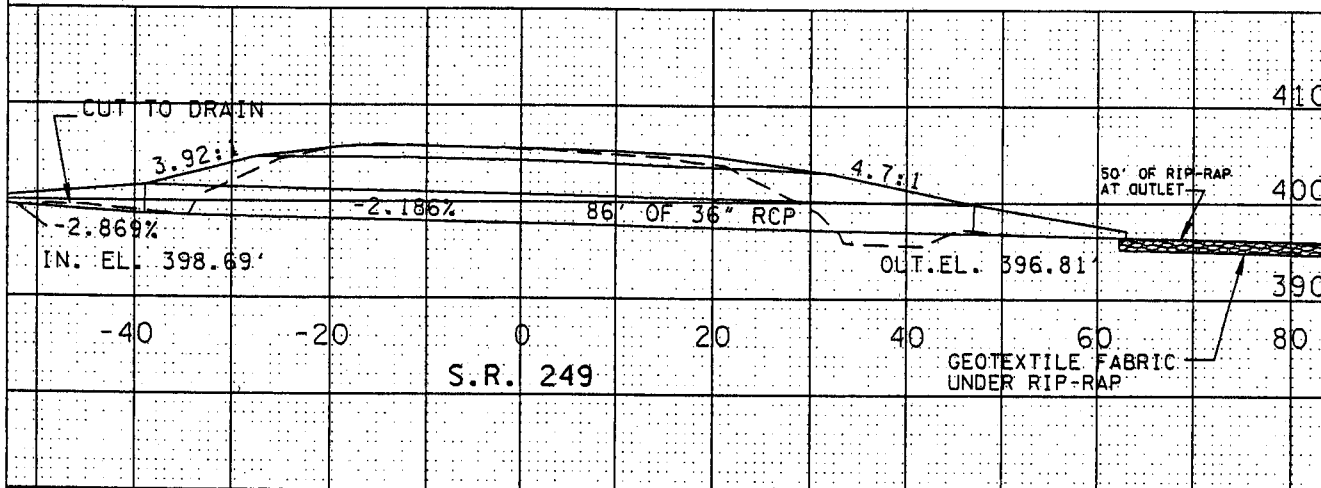
SHEET 6 OF 7

Permit Sketch



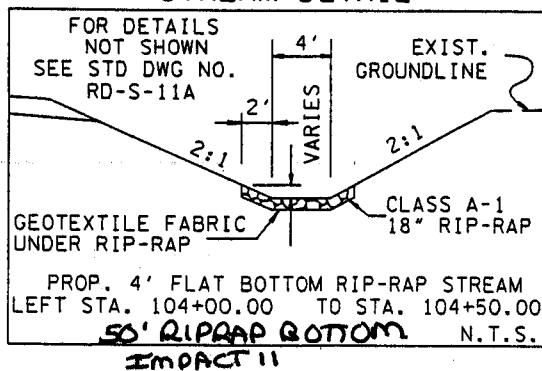
CROSS-SECTION CUT OF PROPOSED STREAM CHANNEL CHANGE
STA. 105+00

PROPOSED RELOC. STREAM LENGTH 160' L.F.



CROSS-SECTION CUT OF PROPOSED CULVERT DESIGN
STA. 103+60

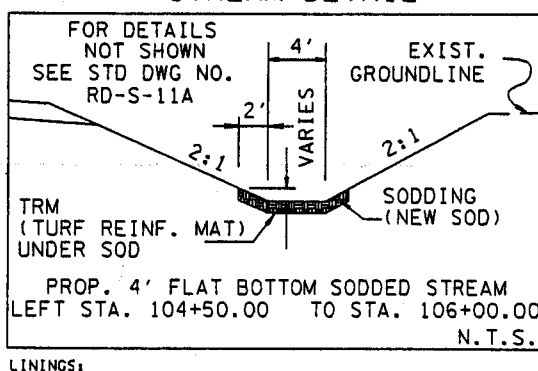
STREAM DETAIL



IMPACT II

STREAM IMPACTS WILL BE MITIGATED
USING THE IN-LIEU FEE PROGRAM

STREAM DETAIL



LININGS:
SOD-ITEM NO. 803-01
TRM (TURF REINFORCEMENT MAT)-PAID FOR AS FLEXIBLE
CHANNEL LINER (CLASS 111) ITEM NO. 805-13.03

APPLICATION BY:

TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT No. BR-STP-249(9)
S.R. 249
CONSTRUCTION OF BRIDGE AND APPROACHES
OVER BRUSH CREEK (LOG MILE 13.51)

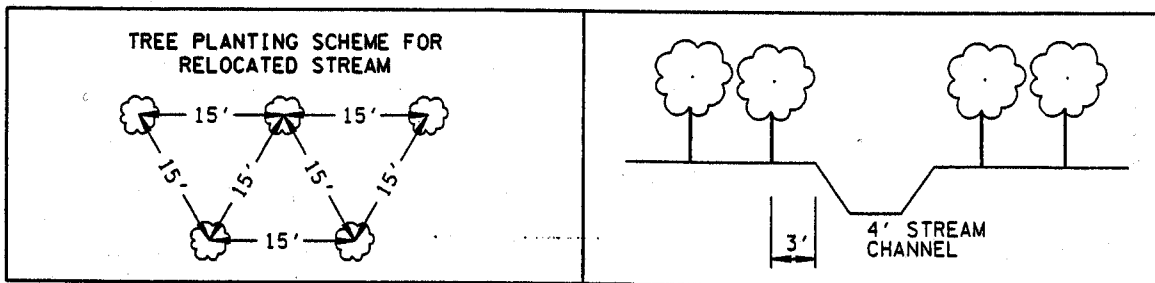
SCALE: 1" = 20'

DATE: / /

REVISED: / /

SHEET 4 OF 7

Permit Sketch



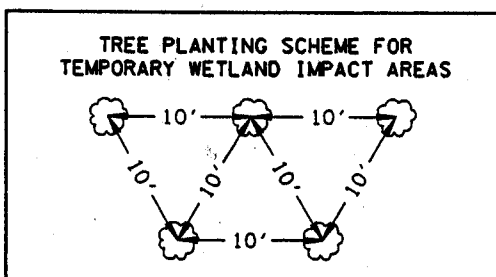
TREES PLANTED AS ONSITE MITIGATION FOR STREAM RELOCATIONS WILL BE PLANTED WITH THE APPROPRIATE TREE SPECIES SPACED ON FIFTEEN-FOOT (15') CENTERS, BEGINNING THREE-FOOT (3') FROM THE EDGE OF THE NEW CHANNEL.

NOTE: ON THE SOUTH SIDE OF THE RELOCATED CHANNEL, PLEASE PLANT THE FOLLOWING LOW-GROWING TREE SPECIES:

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-01.10	TREES (CORNUS AMOMUM, 1.25" - 1.5" CAL, B&B)	8	EACH
802-01.11	TREES (CRATAEGUS PHAENOPYRUM, 1.25" - 1.5" CAL, B&B)	7	EACH

ON THE NORTH SIDE OF THE RELOCATED CHANNEL, PLEASE PLANT THE FOLLOWING SPECIES:

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-01.12	TREES (FRAXINUS PENNSYLVANICA, 1.25" - 1.5" CAL, B&B)	5	EACH
802-01.13	TREES (PLATANUS OCCIDENTALIS, 1.25" - 1.5" CAL, B&B)	5	EACH



AREAS OF TEMPORARY WETLAND IMPACTS WILL BE PLANTED WITH THE APPROPRIATE TREE SPECIES SPACED ON (10') CENTERS. MIX THE SPECIES; DO NOT PLANT AN ENTIRE SECTION WITH ONE SPECIES.

WETLAND MITIGATION NOTES

1. NO SUBSTITUTIONS FOR ANY OF THE TREE SPECIES WILL BE ACCEPTED WITHOUT WRITTEN PERMISSION FROM THE TDOT ENVIRONMENTAL PLANNING AND PERMITS DIVISION. NO CLONES OR CULTIVARS WILL BE ACCEPTED. ANY TREES FOUND TO BE EITHER INCORRECT SPECIES, IMPROPERLY PLANTED, OR WHICH DO NOT SURVIVE, AT ANY TIME PRIOR TO TERMINATION OF THE CONTRACT, SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. STAKES AND WIRES WILL BE REMOVED IMMEDIATELY PRIOR TO CONTRACT TERMINATION.
2. THE AREA OF TEMPORARY WETLAND IMPACT SHALL BE RESTORED TO PRE-CONSTRUCTION ELEVATION, RESEEDED, AND/OR REPLANTED WITH VEGETATION AS SOON AS POSSIBLE FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES.
3. PERMANENT WETLAND IMPACTS WILL BE MITIGATED IN THE HARPEETH WETLAND MITIGATION BANK AT A 2:1 RATIO.
4. NO WORK OR CONSTRUCTION VEHICLES ARE TO BE ALLOWED WITHIN THE AREA OF WETLANDS OUTSIDE THE RIGHT-OF-WAY.
5. TO MINIMIZE ROOT EXPOSURE AND DRYING, BARE ROOT SEEDLINGS SHALL BE KEPT MOIST AND STORED IN A COOL, DARK LOCATION UNTIL PLANTED. KEEPING BARE ROOT SEEDINGS IN A BAG UNTIL THEY CAN BE PLANTED.

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-02.01	SEEDLING (QUERCUS PHELLOS 18" - 24" HT, BR)	18	EACH
802-02.02	SEEDLING (PLATANUS OCCIDENTALIS 18" - 24" HT, BR)	18	EACH
802-02.03	SEEDLING (FRAXINUS PENNSYLVANICA 18" - 24" HT, BR)	18	EACH
802-02.04	SEEDLING (LIQUIDAMBAR STYRACIFLUA 18" - 24" HT, BR)	18	EACH

- * BR = BARE ROOT
- * HT = HEIGHT
- * B&B = BALLED AND BURLAPPED

APPLICATION BY:

TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT No. BR-STP-249(9)
S.R. 249
CONSTRUCTION OF BRIDGE AND APPROACHES
OVER BRUSH CREEK (LOG MILE 13.51)

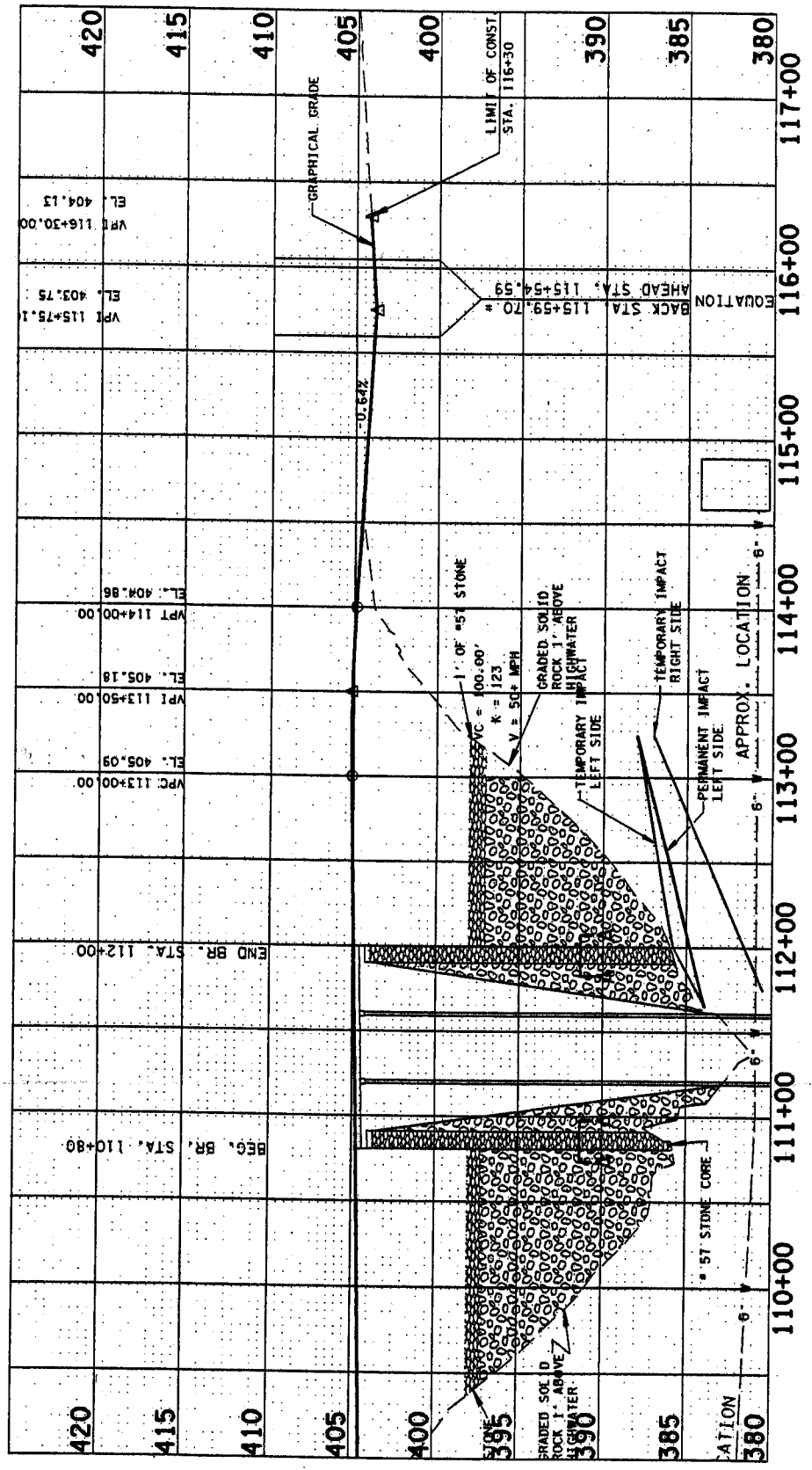
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SHEET 5 OF 7

File No. 200300264
PN 03-75

CHEATHAM COUNTY

SR-249: PIN#101561.00,11014-1209-94,BR-STP-249(9)
CONSTRUCTION OF BRIDGE AND APPROACHES
OVER BRUSH CREEK S.R. 249 (LOG MILE 13.51)



SCALE: 1"=100' HORIZ.
1"=10' VERT.

File No. 200300264

0.007

0.040

6:1

4:1

2:1

2:1

4' FLAT BOTTOM DITCH EL. 390.62'

EXIST. CHANNEL

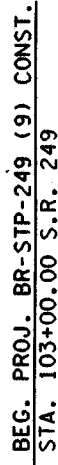
0 20 40 60 80

-20



CROSS-SECTION CUT OF PROPOSED CHANNEL CHANGE
STA. 105+00

Technical drawing of a tapered shaft. The shaft has a diameter of 1.10±0.05 at the left end and a diameter of 1.0 at the right end. The length of the shaft is 50. The taper is indicated by a triangle with a base of 1.0 and a height of 0.05. The text "50 TAPER" is written below the shaft. The text "OF CONST." is written to the left of the shaft. The text "P.L. 105+000" is written vertically to the right of the shaft.



PROPOSED LA 4007

File No. 2003000264
PN 03-75

Project # 11014-1209-94
PIN 101561.00
Project Description: Replace Bridge over Brush Creek @ Log Mile 13.51
Cheatham County

Table 1. Summary of Individual Permit (ARAP) Stream Mitigation

Permit I.D.	Impact Stations	Exist. Stream Impact ft	Prop. Open Stream Length ft	Total Exist. Structure Length ft	Proposed Structure or Ext. ft	Total Structure Length ft	Surface Area Impact ac	Replacement Length Required ft	Replacement Length Prop. On-Site ft	Total In-Lieu Fee Length ft	In-Lieu Fee Impact I (x 0.50) ft	In-Lieu Fee Impact II (x 0.75) ft	In-Lieu Fee Impact III (x 1.0) ft
IARAP #1	103+00± to 106+20±	259.0	160.0	68.0	118.0	118.0	0.03	209.0	160.0	99.0	0.0	50.0	49.0
TOTALS		259.0	160.0	68.0	118.0	118.0	0.03	209.0	160.0	99.0	0.0	50.0	49.0
In-Lieu Fee Costs											\$0	\$7,500	\$9,800
Total In-Lieu Fee Cost =											\$17,300		

In-Lieu Fee
Impact I : Loss of riparian Canopy on proposed stream relocation, channel modifications that deviate from or degrade the proper pattern, profile, dimension, and/or in stream habitat (riffles, pools, structures, etc.) and synthetic channel liners along banks (x 0.50)
Impact II : Riprap lined channels (bottom & sides), channel modifications that significantly increase the existing channel cross sections to convey flood flows, riprap or concrete lined stream banks (both banks), Impoundments (x 0.75)
Impact III : Culverts/ Filling, loss of stream length, concrete lined channels (bottom & sides) (x 1.0)

		Exist. Open Stream		Exist. Stream Impact		Impact III	
		259.0	Exist. Open Stream	327.0	Exist. Stream Impact		
		68.0	Existing Structure	-49.0	Loss of stream		
		327.0	Exist. Stream Impact	-50.0	Prop. Open Stream (Rip-Rap)		
Minus		118.0	Prop. Structure & Headwalls	-110.0	Prop. Open Stream		
		209.0	Replacement Length Required	-118.0	Prop. Structure & Headwalls		
Minus		160.0	Proposed Open Stream	0.0			
		49.0	Stream Loss				